Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Previously presented) An image sensor comprising:
- (a) a plurality of pixels;
- (b) a color filter pattern spanning at least a portion of the pixels, wherein the color filter pattern forms a plurality of color filter kernels having the same colors in a predetermined arrangement wherein the kernels are arranged in at least two different uniformly distributed sets; and
- (c) a mechanism for controlling integration time of the different sets of kernels according to their spatial location, wherein the integration time is different for each set of the kernels.
- 2. (Original) The image sensor as in claim 1, wherein the color filter pattern is a Bayer color filter pattern.
- 3. (Original) The image sensor as in claim 1, wherein the color filter pattern is a $2x^2$ kernel.
- 4. (Original) The image sensor as in claim 3, wherein the integration time pattern is an alternating pattern of two lines at one integration time and adjacent two lines at a second integration time.
- 5. (Original) The image sensor as in claim 3, wherein the integration time for a first set of 2x2 pixels associated with a first kernel is at a first integration time, and the integration time of adjacent 2x2 kernels in the same set of two lines at a second integration time.
- 6. (Original) The image sensor as in claim 5, wherein the integration time pattern of adjacent two lines groups is offset by two pixels.

- 7. (Cancelled)
- 8. (Original) An image sensor comprising:
- (a) a plurality of pixels arranged in an array of rows and columns; and
- (b) a readout mechanism that provides a series of output signal values associated with a row sync signal with a number of data signal values corresponding to a number of pixels in a row or desired portion of a row; wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array.
 - 9. (Previously Presented) A camera comprising:
 - (a) an image sensor comprising:
 - (a1) a plurality of pixels;
- (b) a color filter pattern spanning at least a portion of the pixels, wherein the color filter pattern forms a plurality of color filter kernels having the same colors in a predetermined arrangement wherein the kernels are arranged in at least two different uniformly distributed sets; and
- (c) a mechanism for controlling integration time of the different sets of kernels according to their spatial location, wherein the integration time is different for each set of the kernels.
- 10. (Original) The camera as in claim 9, wherein the color filter pattern is a Bayer color filter pattern.
- 11. (Original) The camera as in claim 9, wherein the color filter pattern is a 2x2 kernel.
- 12. (Original) The camera as in claim 11, wherein the integration time pattern is an alternating pattern of two lines at one integration time and adjacent two lines at a second integration time.

- 13. (Original) The camera as in claim 11, wherein the integration time for a first set of 2x2 pixels associated with a first kernel is at a first integration time, and the integration time of adjacent 2x2 kernels in the same set of two lines at a second integration time.
- 14. (Original) The camera as in claim 13, wherein the integration time pattern of adjacent two lines groups is offset by two pixels.

15. (Cancelled)

- 16. (Original) The camera as in claim 9 further comprising a mechanism that reads out at least a subset of the plurality of pixels and uses the signal values obtained from the readout to determine the integration times of the plurality of pixels.
 - 17. (Original) A camera comprising:
 - (a) an image sensor comprising:
- (b) a plurality of pixels arranged in an array of rows and columns; and
- (c) a readout mechanism that provides a series of output signal values associated with a row sync signal with a number of data signal values corresponding to a number of pixels in a row or desired portion of a row; wherein the output signal values have signals that are generated from pixels within at least two physically separate rows within the array.
- 18. (Previously Presented) The camera as in claim 17, wherein the data values are reconstructed in a camera memory.